

from the  
INTERNATIONAL SEARCHING AUTHORITY

To:  
KATHLEEN R. TERRY  
13840 JOHNSON ST. NE  
HAM LAKE, MN 55304

PCT

REC'D 22 AUG 2005

WIPO

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year)

18 AUG 2005

Applicant's or agent's file reference

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US05/01435

International filing date (day/month/year)

14 January 2005 (14.01.2005)

Priority date (day/month/year)

14 January 2004 (14.01.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): A61K 31/70; C07H 3/02 and US Cl: 514/23; 536/1.11

Applicant

BIOENERGY, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Michael C. Henry

Telephone No. 703 308-1235

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/01435

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US05/01435

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 8	YES
	Claims 1-7, 9-11	NO
Inventive step (IS)	Claims 8	YES
	Claims 1-7, 9-11	NO
Industrial applicability (IA)	Claims 1-11	YES
	Claims NONE	NO

2. Citations and explanations:

Claim 8 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a method for enhancing recovery from sepsis comprising the administration of D-ribose to a mammal suffering from sepsis.

Claim 9-11 lack novelty under PCT Article 33(2) as being anticipated by ST. CYR et al. Claim 9 is drawn to a composition suitable for intravenous administration comprising substantially pure, pyrogen-free D-ribose. Dependent claims 10 and 11 are drawn to said composition further comprising D-glucose and specific percentages (%) of ribose and glucose. ST. CYR et al. disclose applicant's composition of claims 9-10 comprising 5% D-ribose in 5% D-glucose (see col. 14, example 7, lines 4-48).

Claims 1-7 lack an inventive step under PCT Article 33(3) as being obvious over ST. CYR et al. Claim 1 is drawn to a method of reducing recovery time of a mammal undergoing general anesthesia comprising the administration of an effective amount of D-ribose to a mammal. Claims 2-7 are drawn to specific routes of administration of said ribose, the administration of specific amounts and doses of ribose. ST. CYR et al. disclose a method of treating hypoxia and the symptoms of hypoxia in mammals by administering to the mammals an effective amount of ribose (see abstract and claims). In addition, ST. CYR et al. disclose that mammals experiencing transient hypoxia from anesthesia can be treated with said ribose (see abstract). Furthermore, ST. CYR et al. disclose that transient hypoxia frequently occurs in individuals undergoing anesthesia (col.2, lines 7-10 and 30-33). Therefore, it is obvious to administer ribose to an individual (which includes a mammal) undergoing anesthesia to treat transient hypoxia thus reducing recovery time of the said individual undergoing the anesthesia. It should be noted that the examiner considers the treating of transient hypoxia a reducing of the recovery time of the individual undergoing the anesthesia, since the said treating of the transient hypoxia would cause the patient to recover in less time than if the patient was not treated for the transient hypoxia with ribose.

Claims 1-11 the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/US2005/001435	International filing date ( <i>day/month/year</i> ) 14 January 2005 (14.01.2005)	Priority date ( <i>day/month/year</i> ) 14 January 2004 (14.01.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant BIOENERGY, INC.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 17 July 2006 (17.07.2006)  Authorized officer  <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Nora Lindner</div>  e-mail: pt02@wipo.int
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

REC'D 22 AUG 2005

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To:  
KATHLEEN R. TERRY  
13840 JOHNSON ST. NE  
HAM LAKE, MN 55304

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: KATHLEEN R. TERRY 13840 JOHNSON ST. NE HAM LAKE, MN 55304		<b>18 AUG 2005</b> Date of mailing (day/month/year)
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International Patent Classification (IPC) or both national classification and IPC IPC(7): A61K 31/70; C07H 3/02 and US Cl: 514/23; 536/1.11		
Applicant BIOENERGY, INC.		

**1. This opinion contains indications relating to the following items:**

- |                                     |              |  |
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For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer <i>Michael C. Henry</i> Michael C. Henry Telephone No. 703 308-1235
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Form PCT/ISA/237 (cover sheet) (January 2004)

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No. \_\_\_\_\_

PCT/US05/01435

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- ☐ a sequence listing  
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US05/01435

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 8 YES  
Claims 1-7, 9-11 NO

Inventive step (IS)

Claims 8 YES  
Claims 1-7, 9-11 NO

Industrial applicability (IA)

Claims 1-11 YES  
Claims NONE NO

2. Citations and explanations:

Claim 8 meets the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a method for enhancing recovery from sepsis comprising the administration of D-ribose to a mammal suffering from sepsis.

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